REMARKS/ARGUMENTS

Claim 1 has been rejected as anticipated by Kitamura.

To set out the invention more clearly, claim 1 has been amended to call for the drain region being disposed at one end of the trenches, and the MOSgate structure at the other end of the trenches. As before, claim 1 calls for mesas of one conductivity which have diffusions of opposite conductivity on their sidewalls (also sidewalls of the trenches) wherein the thickness of the mesas and the concentration of the dopants in the diffusions are selected to cause the mesas to fully deplete under reverse voltage conditions.

As is clear from the specification, and as has been explained in the appeal brief which is of record, the mesas which are disposed between the drain region and the MOSgate structure serve as conduits for transferring current. When the thickness of the mesas and the concentration of dopants in the diffusion on the sidewalls of the mesas are selected to cause full depletion, the device is provided with a mechanism for improving its breakdown voltage capability.

On the other hand, Kitamura does not show or even suggest: (a) a plurality of trenches; (b) the drain region disposed at one end of the trenches and a MOSgate structure at the other end of the trenches; (c) diffusions of opposite conductivity in the sidewalls of the trenches.

Kitamura only shows a trench 3 or trenches formed in the drain region 4 of a device. There are no diffusions of opposite conductivity even seen in any of the embodiments shown by Kitamura. The Examiner is invited to review the embodiments to confirm that the conductivity of the mesas is only one type (n type in most embodiments). The only region of the opposite conductivity (p type in most embodiments) seen in the embodiments is the channel region 8, which is part of the MOSgate structure.

Nevertheless, in the Office Action, it has been stated that the thickness of the mesas and the concentration of dopants of the diffusions of the opposite conductivity in the sidewalls of the trenches (which quite clearly do not exist) are inherently selected to fully deplete under a reverse voltage condition.

First, it is not possible to maintain the position that a characteristics can exist when certain features (the diffusions in the sidewalls) are wholly missing from the reference.

Second, the law of inherency is clear. A limitation is inherent in the prior art if it is necessarily present. To prove inherency, evidence must be submitted to prove the necessary existence of this limitation in the prior art. See MPEP §2112. Apart from a conclusory statement of inherency the Office Action does not provide any evidence of inherency as required by law. Specifically, the Office Action does not show how the thickness of the mesas and the concentration of dopants in the diffusions (which do not exist) in the devices shown by Kitamura are necessarily selected to fully deplete. In the absence of such evidence the position taken in the Office Action is without foundation.

It is respectfully submitted that claim 1 is not anticipated by Kitamura. Reconsideration is requested.

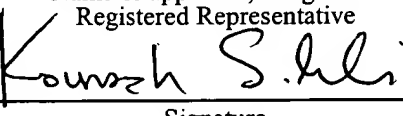
The remaining claims depend from claim 1. Each of these claims includes other limitations which in combination with those of claim 1 are not shown or suggested by the art of record. Reconsideration is requested.

The application is believed to be in condition for allowance. Such action is earnestly solicited.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 18, 2004:

Kourosh Salehi

Name of applicant, assignee or Registered Representative

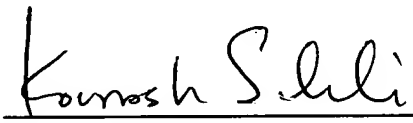


Signature

February 18, 2004

Date of Signature

Respectfully submitted,



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